

ISSUE DATE: August 13, 1999

## **DLA-Tantalum/ Columbium Concentrates-001**

# **SOLICITATION OF OFFERS FOR TANTALUM AND COLUMBIUM CONCENTRATES**



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## **SECTION A - SOLICITATION**

### **A.1 Introduction (JAN 95)**

a. The Defense Logistics Agency (DLA), Defense National Stockpile Center (DNSC), is soliciting offers for the sale of tantalum/columbium concentrates, approximately 103,324 lbs (contained Ta) for the remaining FY 1999. The initial opening will be held on Monday, August 30, 1999 at 10:00 A.M. local time, Ft. Belvoir, VA. If all material is not sold, subsequent offerings will be held pending AMP approval for the following fiscal year. Offers must be received at the address in Section **B.2.a.** by 10:00 A.M., local time, Ft. Belvoir, VA. **In the event a day scheduled for receipt of offers is a holiday or DNSC is otherwise closed at the time set, offers for that day will be received at (10:00 A.M.), local time, Ft. Belvoir, VA on the next DNSC business day.**

b. Offerors are advised to telephone the Directorate of Stockpile Contracts at (703) 767-6500 to ascertain the availability of material.

c. Delivery is F.O.B. carrier's conveyance. The Government will assist with outloading. (See **F.1.d.**)

d. This solicitation cancels and supersedes **Solicitation of Offers DLA-TANTALUM MINERALS-001, which is hereby cancelled in its entirety.**

### **A.2 Description (JAN 95)**

a. TANTALUM/COLUMBIUM concentrates were acquired in 1981 and 1984 and are stored in galvanized drums in the form of concentrates. The material is separated into Category 1 and Category 2. See Section J.1. Category 2 requires an NRC license as discussed in Section A.3 below.

b. Government analyses indicate that the material conforms to the data listed in Paragraph A.2.a, Section I.2, and Section J.1; however, no warranty or guarantee is made that the material so conforms or that it will be suitable for any particular purpose.

### **A.3 Nuclear Regulatory Commission License - Category 2**

a. Category 2 material is regulated by the U.S. Nuclear Regulatory Commission (NRC) as source material because it contains by weight 0.05 percent or more of uranium or thorium or a combination thereof. As such, an NRC specific source material license is required to receive, possess, deliver, use or transfer the material pursuant to 10 CFR Part 40. In order to export the material outside the United States, NRC requires a specific export license pursuant to its regulations in 10 CFR Part 110. In addition, offerors exporting the material must comply with applicable Department of Transportation (DOT) regulations regarding transportation of radioactive material. See 10 CFR Part 71.

**b.** At the time of submission of offers, offerors must provide DNSC with one of the following: 1) a current NRC specific source material license if the offeror intends to possess and transfer source material, 2) a specific export license issued by the NRC if the offeror intends to export source material, or 3) a statement of intended use of the material if the offeror does not have a current NRC specific source material or export license. See Section I.11. In this case, the applicable NRC license will be required prior to the removal of any material. Failure to complete or submit a statement of intended use in Section I.11 may result in the offer not being considered.

**c.** The information provided in Section I.11 will be used in evaluating offers in accordance with Section B.7.

**d.** Any questions regarding licensing of source material shall be directed to the Office of General Counsel at the NRC. The telephone number is (301) 415-1888.

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**SECTION B – PREPARATION AND SUBMISSION OF OFFERS****B.1 Submittals (JAN 95)**

Offerors shall submit **all** of the following documents along with the offer unless otherwise noted:

**a. Section I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**  
with the section entitled “Execution by Contractor” completed.

**b. Section I.2, Item Offer Page(s) – DLA TANTALUM/COLUMBIUM CONCENTRATES** with (1) quantity offered column; (2) unit price column; (3) total dollar value column; (4) company name; (5) signature; (6) date; (7) name and title; (8) telephone number and (9) fax numbers blocks completed.

**c. Representations, Certifications and Identifications at Section I.3 through I.10.**  
**Offerors please note: If Annual Representations, Certifications and Identifications have previously been submitted they need not be resubmitted**

**d. Tantalum/Columbium Representation at Section I.11.**

**e. Any other terms the Offeror wishes to negotiate. (See Section B.6.c)**

**B.2 General Information (JUL 97)**

**a. Facsimile offers and modifications will be accepted in accordance with Section B.5.**  
Offers may also be submitted by mail or hand delivered enclosed in a sealed envelope and addressed to:

ATTN: DNSC-L (Bid Custodian)  
Defense National Stockpile Center  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand Delivered)  
Fort Belvoir, Virginia 22060-6223  
Facsimile No. (703) 767-5541

Place the name and address of the Offeror in the upper left corner and the following information in the lower left corner on the face of the envelope:

SOLICITATION OF OFFERS  
DLA-TANTALUM/COLUMBIUM CONCENTRATES-001

**b. The Offeror agrees, if its offer is accepted by the Government within fifteen (15) working days from the date specified in the Solicitation for receipt of offers, to purchase any or all material on which offers are made at the price offered and to take delivery of the material within the time specified in the executed Section I.1 Sale of Government Property Negotiated Sales Contract (APR 99).**

c. Unless a designation of agent is on file at DNSC, an Offeror submitting an offer as agent for another party shall submit written proof, either prior to or with the offer, that it is authorized to act as agent and shall tender the offer in the name of the principal.

### **B.3 Minimum Quantity (JAN 95)**

Minimum offer is one (1) line item. An offer for less than the minimum quantity may render the Offeror ineligible for award.

### **B.4 Late Submissions, Modifications, and Withdrawals of Offers (MAR 98)**

a. Any offer received at the office designated in the solicitation after the exact time specified for receipt of offers will not be considered unless it is received before award is made and—

(1) It was sent by registered or certified mail not later than the fifth calendar day before the date specified for receipt of offers (e.g., an offer submitted in response to a solicitation requiring receipt of offers by the 20th of the month must have been mailed by the 15th);

(2) It was sent by mail (or telegram or facsimile, if authorized) or hand-carried (including delivery by a commercial carrier) if it is determined by the Government that the late receipt was due primarily to Government mishandling after receipt at the Government installation;

(3) It was sent by U.S. Postal Service Express Mail Next Day Service-Post Office to Addressee, not later than 5:00 p.m. at the place of mailing two working days prior to the date specified for receipt of offers. The term “working days” excludes weekends and U.S. Federal holidays; or

(4) It was transmitted through an electronic commerce method authorized by the solicitation and was received at the initial point of entry to the Government infrastructure not later than 5:00 p.m. one working day prior to the date specified for receipt of offers.

(5) There is acceptable evidence to establish that it was received at the activity designated for receipt of offers and was under the Government’s control prior to the time set for receipt of offers, and the Contracting Officer determines that accepting the late offer would not unduly delay the sale; or

(6) It is the only offer received.

b. Notwithstanding paragraph a. of this provision, the only acceptable evidence to establish the time of receipt of a facsimile bid transmitted to a number other than that listed in Section **B.5** is the time/date stamp manually recorded by Government personnel, other documentary evidence maintained by the installation, or oral testimony or statements of Government personnel. In no event will the time/date annotated by a facsimile machine located at a number other than that listed in Section **B.5** be acceptable evidence to establish the timeliness of the offer.

c. Any modification of an offer, including a modification resulting from the Contracting Officer’s request for “best and final” offer, is subject to the same conditions as in subparagraphs a.(1) through a.(5) of this provision.

d. The only acceptable evidence to establish the date of mailing of a late offer or modification sent either by U.S. Postal Service registered or certified mail is the U.S. or

Canadian Postal Service postmark both on the envelope or wrapper and on the original receipt from the U.S. or Canadian Postal Service. Both postmarks must show a legible date or the offer or modification shall be processed as if mailed late. "Postmark" means a printed, stamped, or otherwise placed impression (exclusive of a postage meter machine impression) that is readily identifiable without further action as having been supplied and affixed by employees of the U.S. or Canadian Postal Service on the date of mailing. Therefore, offerors should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and the envelope or wrapper.

e. Acceptable evidence to establish the time of receipt at the Government installation includes the time/date stamp of that installation on the offer wrapper, other documentary evidence of receipt maintained by the installation, or oral testimony or statements of Government personnel.

f. The only acceptable evidence to establish the date of mailing of a late offer, modification, or withdrawal sent by Express Mail Next Day Service-Post Office to Addressee is the date entered by the post office receiving clerk on the "Express Mail Next Day Service-Post Office to Addressee" label and the postmark on both the envelope or wrapper and on the original receipt from the U.S. Postal Service. "Postmark" has the same meaning as defined in paragraph c. of this provision, excluding postmarks of the Canadian Postal Service. Therefore, offerors should request the postal clerk to place a legible hand cancellation bull's eye postmark on both the receipt and the envelope or wrapper.

g. Notwithstanding paragraph a. of this provision, a late modification of an otherwise successful offer that makes its terms more favorable to the Government will be considered at any time it is received and may be accepted.

h. Offers may be withdrawn by written notice or telegram (including mailgram) received at any time before award. If the solicitation authorizes facsimile offers, offers may be withdrawn via facsimile received at any time before award, subject to the conditions specified in Section B.5 "Facsimile Submissions". Offers may be withdrawn in person by an offeror or an authorized representative, if the representative's identity is made known and the representative signs a receipt for the offer before award.

i. If an emergency or unanticipated event interrupts normal Government processes so that offers cannot be received at the office designated for receipt of offers by the exact time specified in the solicitation, and urgent Government requirements preclude amendment of the solicitation or other notice of an extension of the closing date, the time specified for receipt of offers will be deemed to be extended to the same time of day specified in the solicitation on the first work day on which normal Government processes resume. If no time is specified in the solicitation, the time for receipt is 4:30 p.m., local time, for the designated Government office.

## **B.5 Facsimile Submissions (JUL 97)**

Facsimile offers and modifications will be accepted any time prior to the exact time set for receipt of offers. Facsimile withdrawals will be accepted any time before award.

**Offerors must use the facsimile number: (703) 767-5541.**

a. Definition: "Facsimile submission," as used in this Solicitation, means an offer, modification of an offer, or withdrawal of an offer that is transmitted to and received by the Government via electronic equipment that communicates and reproduces both printed and handwritten material.



- b.** Offerors may submit facsimile submissions as responses to this Solicitation. These responses must arrive at the place, and by the time, specified in the Solicitation.
- c.** Facsimile submissions that fail to furnish required representations or information, that reject any of the terms, conditions, and provisions of the Solicitation, that contain garbled information, or are otherwise incomplete, may be excluded from consideration.
- d.** Facsimile submissions must contain the required signatures.
- e.** The Government reserves the right to make award solely on the facsimile submission. However, if requested to do so by the Contracting Officer, the apparently successful Offeror agrees to promptly submit the complete original signed submission.
- f.** If the Offeror chooses to transmit a facsimile submission, the Government will not be responsible for any failure attributable to the transmission or receipt of the facsimile submission including, but not limited to, the following:
- (1) Receipt of garbled or incomplete submission.
  - (2) Availability or condition of the receiving facsimile equipment.
  - (3) Incompatibility between the sending and receiving equipment.
  - (4) Delay in transmission or receipt of submission.
  - (5) Failure of the Offeror to properly identify the submission.
  - (6) Illegibility of submission.
  - (7) Security of submission data.

**B.6 Consideration of Offers (FEB 98)**

- a. The Government reserves the right to --
  - (1) Reject any or all offers;
  - (2) Waive any informalities and minor irregularities in an offer;
  - (3) Award a quantity less than the quantity offered on at the unit price offered;
  - (4) Accept any one item or group of items in an offer, as may be in the best interest of the Government.
  - (5) Award quantities in excess of that stated as being available for sale.
- b. Offerors may submit multiple offers at various unit prices and may specify a maximum quantity.
- c. The Government may request specific pricing documentation to support the offer submitted. Failure to provide the documentation, if requested, may result in the Offeror being ineligible for award. Pricing data will be treated as proprietary and will not be released by the Government.
- d. "All or none" offers will not be considered.

**B.7 Evaluation of Offers (MAR 98)**

- a. General - The evaluation factors are listed below in descending order of importance:
  - (1) Unit price.
  - (2) Performance Risk associated with NRC license requirements.
  - (3) Payment terms.
  - (4) Removal Schedule.

All evaluation factors other than unit price, when combined, are significantly less important than unit price.

- b. To be considered, offers must meet the following minimum requirements:
  - (1) Submission of the information requested in Section **B.1** and **where applicable, Section I.11**;
  - (2) Compliance with Section **B.6.d**.
- c. Requests for payment terms will be considered only from offerors with a satisfactory performance and payment record with DNSC and a satisfactory current Dun & Bradstreet Report. The maximum acceptable payment term is Net 30 days.

## B.8 Negotiation Procedures (JUL 97)

The Government intends to evaluate offers and award a contract after conducting discussions with all offerors whose offers have been determined to be within the competitive range. However, the Government reserves the right to award without discussions. Accordingly, offerors are advised to include their best possible terms in their initial offer.

If the Government determines that holding discussions is in its best interest, the following procedure will be utilized:

a. **Competitive Range** - The competitive range shall be determined on the basis of price and other factors that are stated in the solicitation and will include all offers which comply with Section **B.7.b.** that have a reasonable chance of being selected for award. Offers not included in the competitive range will not be given further consideration.

b. **Negotiations/Discussions** - Only offerors within the competitive range will be contacted to schedule the day and time for discussions to be conducted. Negotiations will be conducted only with the company official signing **Section I.1 Sale of Government Property Negotiated Sales Contract (APR 99)** or a specifically authorized individual identified in **Section I.8 Authorized Negotiators (JUN 95)**. The content and extent of the discussions is a matter of the Contracting Officer's judgment, based on the particular facts of the sale and each offeror's initial offer.

c. **Discussion Session** - Only one discussion session per offeror is intended. In order to facilitate meaningful discussions, offerors should:

(1) Be prepared to discuss:

- (A) Only those prices and terms included in the initial offer;
- (B) Supporting documentation and justification for the derivation of prices offered;
- (C) NRC license if offeror doesn't currently possess one;
- (D) Payment terms; and
- (E) Removal schedule;

(2) Arrange to have appropriate support personnel present during discussions, i.e., Purchasing, Marketing, etc.

d. **Best and Final Offer Requests** - At the conclusion of discussions, all offerors with which discussions were conducted will be requested to submit a best and final offer (BAFO). Oral requests for best and final offers will be confirmed in writing. Each individual BAFO request will include the following:

- (1) Notice that discussions are concluded;
- (2) Time and date by which BAFOs must be submitted;
- (3) Notice that BAFOs are subject to **Section B.4 Late Submissions, Modifications, and Withdrawals of Offers (MAR 98)**;
- (4) A record of negotiated issues and understandings between the Government and the offeror (as applicable);
- (5) A list of remaining questions/deficiencies (if any);
- (6) A caution to offerors to provide supporting documentation for any changes to their prior offers as revised during discussions; and
- (7) Notice that the Government intends to evaluate best and final offers and award a contract without further discussions.

e. **Best and Final Offer Responses** - BAFOs should strictly conform to the best and final offer request. If no response is received to the BAFO request, the initial offer will be considered as the best and final offer. Changes which are not fully supported by documentation may not be evaluated or considered.

f. **Subsequent Discussions/BAFO Requests** - Generally, only one best and final offer will be requested. After receipt of best and final offers, discussions will not be reopened unless the Government determines it is in its best interest to do so. If discussions are reopened, an additional request for best and final offers will be issued to all offerors still within the competitive range.

## **B.9 Disclosure of Information (DEC 97)**

Proprietary or confidential information disclosed in offers/discussions/BAFOs will not be disclosed to the public or used by the Government except for evaluation purposes.

## **B.10 Responsibility Determination (JUN 95)**

No award shall be made unless the Contracting Officer makes an affirmative determination of responsibility. To be determined responsible, an Offeror shall, at a minimum, have adequate financial resources, a satisfactory performance record, and a satisfactory record of integrity and ethics. For example, an Offeror may be determined to be non-responsible and therefore ineligible for award if there is a record of poor payment (e.g., checks returned for insufficient funds) or poor performance (e.g., failure to pay for or remove material on time).

## **B.11 Contract Award (JUL 97)**

A written award or acceptance of an offer signed by the Contracting Officer and furnished to a successful Offeror within the time specified for acceptance shall result in a binding contract incorporating all the terms and conditions of this Solicitation unless otherwise stated in the executed Section **I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**.

## **B.12 Unsuccessful Offerors (FEB 98)**

Award will be made with reasonable promptness to the successful offeror(s). The Contracting Officer will notify unsuccessful offeror(s) at the earliest practicable time of the basis for non-award.

**SECTION C – INSPECTION (JUN 98)**

- a. An offeror may, at its own expense, visually inspect the material at the storage locations . **No sampling of the material will be permitted.**
- b. Requests for an appointment to visually inspect the material at the Hammond Depot must be made in writing or by facsimile submission on company letterhead to the Point of Contact identified in **Section J.2 Storage Locations** , at least ten **(10)** working days prior to the date of the requested inspection. Requests shall include the name and title of each individual wishing to visually inspect the material. Offerors will be notified by telephone of the date the material will be available for inspection. The Government reserves the right to limit the number of individuals granted access to the depot.
- c. Offerors, their agents and representatives shall comply at all times with the rules of the storage location.

**SECTION D - PAYMENT****D.1 Payment (FEB 98)**

- a. Payment shall be made in U.S. dollars.
- b. Payment shall be made by wire transfer, U.S. Postal Service money order, or company or bank check.
  - (1) Wire transfer payment shall be made in accordance with instructions in **Section J.5**. Fees for wire transfers are the responsibility of the Contractor. If payment is by wire transfer and the wrong account number is used, shipment of material may be delayed by up to one week or the wire transfer may be returned to the sender.
  - (2) All checks must be drawn on a U.S. domestic bank or on the United States branch of an acceptable foreign bank and must be payable in United States currency. **A service charge of \$100.00 will be applied to all returned checks.**
- c. Payment shall be made to the **Defense Finance and Accounting Service - Columbus (DFAS-Columbus)**. If a check is not made payable to DFAS-Columbus, the check may be returned and the \$100.00 fee stated in **D.1.b.** charged. Payment shall be accompanied by **identifying information including the contract number, invoice number, and a description of the material purchased**. Payments without the required identification may be returned and shipment delayed. Payments shall be sent to:

ATTN: DNSC-DF, Accounts Receivable  
Defense National Stockpile Center  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand Delivered)  
Fort Belvoir, VA 22060-6223
- d. Invoices issued for adjustments for variations in quantity or weight, storage charges, or interest shall be paid promptly.
- e. If payment is not made in full within 30 calendar days of issuance of an invoice, the Government will issue a "demand" letter, demanding payment of the outstanding amount. If all moneys due are not paid within 30 calendar days after the date of the Government's demand letter, the Contractor will be considered delinquent and any outstanding charges will be reduced by any subsequent payments. No material will be released until all delinquent charges are paid. (See Sections **F.1.a.** and **G.10.**)

**D.2 Payment Due Date (JUL 97)**

- a. Unless otherwise specified in the contract, payment shall be made before shipment of material and before the time specified in the executed **Section I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**. If payment is not received by 11:00 a.m., local time, on the payment due date, payment will not be credited until the next Government business day. Interest and storage charges will accrue accordingly.
- b. In the event the payment due date falls on a Saturday, Sunday, or holiday, then the payment due date will be extended to the next Government business day.

**D.3 Interest (JUL 97)**

**a.** All amounts that become payable by the Contractor to the Government under this contract shall bear simple interest from the date due until paid. The interest rate shall be the interest rate established by the Secretary of the Treasury as provided in 41 U.S.C. 611, which is applicable to the period in which the amount becomes due, as provided in paragraph **b.**, below.

**b.** Amounts shall be due at the earliest of the following dates:

(1) The final day of the contract period specified in Section **I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**; or

(2) The date of the first written demand for payment under the contract.

**SECTION E - REMOVAL****E.1 Removal of Material (FEB 98)**

a. The contract period is based on the quantity of material awarded and begins on the date of contract award. The contract period is as follows:

<b><u>Quantity</u></b> <b><u>Lbs(contained Ta)</u></b>	<b><u>Contract period</u></b> <b><u>in Calendar Days</u></b>
<b>0-50,000 lbs</b>	<b>30</b>
<b>50,001 – 103,324</b>	<b>60</b>

b. If the Contractor fails to pay for and remove the material in accordance with the schedule specified in the contract, the Contractor will be considered delinquent and no material will be shipped until payment has been made.

c. The contract period includes Saturdays, Sundays, and holidays. If the last day of the contract period is a Saturday, Sunday, or holiday, or the storage location is otherwise closed that day, the period of contract performance will be extended to the next Government workday.

**E.2 Storage Charges (JUL 97)**

a. Storage charges shall be assessed on all material remaining after the last day of the contract period. The Government reserves the right to remove any remaining material to a commercial storage facility and be reimbursed by the Contractor for any expenses incurred. Storage charges continue to accrue until all the material has been removed or the contract is terminated for default, in which case the Contractor will be liable for damages, as set forth in Section **G.7 Default** of the Solicitation..

b. The storage charge is the greater of the following: (1) **\$.03 per pound** (if a fraction of a pound remains, the charge will be for a full pound) per 30 day period regardless of whether the material remains in storage a period of 30 days or less than 30 days; or (2) commercial storage charges, if applicable.

c. Storage charges will be invoiced upon shipment. Payment shall be made promptly.

d. Payment of storage charges shall not relieve the Contractor of its obligation to remove the material in a timely manner. Acceptance of storage payments by the Government is not a waiver of the Government's right to default the Contractor for failure to remove the material (See Section **G.7 Default**).



## **SECTION F - SHIPPING**

### **F.1 Request for Shipment (JUN 97)**

a. Delivery is F.O.B. carrier's conveyance. At least 10 working days prior to the date shipment is required to commence the Contractor shall furnish to the designated depot commercial bills of lading. Simultaneously the Contractor shall complete and fax the form in **Section J.3 Shipping Instructions (JAN 95)** to the Contracting Officer. The Government will only accept shipping instructions from those individuals designated in **Section I.9** as being authorized to release material on behalf of the Contractor. **No material will be released until all outstanding delinquent charges and payments have been satisfied.**

b. "Shipping Instructions" shall include the following:

- (1) Quantity of material to be released.
- (2) Designation of type and kind of conveyance.
- (3) Name of the carrier (please include a telephone number where this contact can be reached).
- (4) "Ship to" location.
- (5) Minimum load per conveyance (optional)
- (6) Desired shipping schedule.
- (7) Name and telephone number of an agent who can furnish additional shipping information if needed.
- (8) Any additional pertinent information.
- (9) Copy of NRC license in accordance with Section A.3.b.

c. The shipping schedule shall allow sufficient time for the Government to reasonably meet such schedule prior to the last day of the contract period commensurate with existing loading facilities and other commitments at the Government's storage locations. Information regarding Government commitments may be obtained from the address specified in **Section J.2**.

d. If outloading is to be accomplished by truck the Government will provide lumber and nails from available depot stock if requested by the Contractor's designee/driver. The Contractor's designee shall perform any necessary procedure(s) to ensure the cargo is safely secured prior to leaving the depot. The Government will not block, chock, brace, lash, band, or in any manner secure the cargo on the Contractor's conveyance(s). The designee shall witness the loading. Any expenses over and above those normally incurred by the Government to meet the public carrier's requirements for loading like materials will be at the expense of the Contractor.

e. If outloading is to be accomplished by rail, the Government will provide materials and will block, chock, brace, and/or band as necessary to secure the cargo. The Government will not be responsible for demurrage charges.

f. The Contractor, its agent and employees shall comply with all applicable rules at the storage depot; Federal, state and local load limitations; and all safety, health, and environmental requirements.

g. Contractor will be responsible for demurrage charges, damage to rail tracks and switches, or any other costs associated with derailment.

h. Requests for shipment shall be for a minimum of a complete line item. Shipping instructions and information requested in paragraph a., above, are to be furnished to the following address:

Defense National Stockpile Center  
ATTN: Tantalum/Columbium Concentrates Contracting Officer  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand delivered)  
Ft. Belvoir, VA 22060-6223  
Facsimile Number: (703) 767--5504

i. The Government shall determine the order in which the material is scheduled, coordinated, and outloaded.

j. The Contractor shall pay \$100 per day if the Contractor's conveyance fails to report to an unstaffed storage location as scheduled. See Section J.2 for identification of unstaffed locations.

## **F.2 Insurance Requirements (APR 95)**

The Contractor shall procure and maintain, and require any subcontractor to procure and maintain, during the entire period of performance under this contract, such insurance as stipulated herein.

a. Workers' compensation and employer's liability. The Contractor is required to comply with applicable Federal and State workers' compensation and occupational disease statutes. Employer's liability coverage of at least \$100,000 is required, except in States with exclusive or monopolistic funds that do not permit workers' compensation to be written by private carriers.

b. General liability. Bodily injury liability insurance coverage written on the comprehensive form of policy of at least \$500,000 per occurrence.

c. Automobile liability insurance written on the comprehensive form of policy is required. The policy shall provide for bodily injury and property damage liability covering the operation of all automobiles used in connection with performing the contract. Policies covering automobiles operated in the United States shall provide coverage of at least \$200,000 per person and \$500,000 per occurrence for bodily injury and \$20,000 per occurrence for property damage. The amount of liability coverage on other policies shall be commensurate with any legal requirements of the locality and sufficient to meet normal and customary claims.

**F.3 Weighing (JAN 95)**

- a. No outweighing of material will be performed by the Government. The Government weights of record shall govern. The Contractor may elect to have a representative present to witness the outloading.
- b. Weight certificates shall be provided at the expense of the Government. Outbound Storage Reports will be issued by the Government and will be final for payment purposes.
- c. In the event that any broken containers are detected at time of shipment, these will be overpackaged by the Government at the Government's expense prior to outloading. If no loss is discernible, the weight of record with the Government shall govern for that item and shall be final for payment.

**F.4 Assumption of Risk and Disclaimer of Liability (JUL 97)**

The Contractor, its assigns or agents, assumes full responsibility for all injury or damage to persons or property occasioned by or occurring in connection with or incident to any use or possession of this material. The Government assumes no liability for any damages to the property of the Contractor or any other person or property, or for any personal injury, illness, disability or death to the Contractor, Contractor's employees or any other person subject to Contractor's control, or for any other consequential damages arising from or incident to the purchase, use, loading, processing, disposition, or any subsequent operation performed upon, exposure to or contact with any component, part, constituent or ingredient of this item, material or substance.

**F.5 Adjustment for Variation in Quantity or Weight (JAN 95)**

The Government reserves the right to vary the quantity or weight delivered by 5% from the quantity or weight listed in the Solicitation and the Contractor agrees to accept delivery of any quantity or weight within these limits. The contract price will be adjusted upward or downward in accordance with the unit price and on the basis of the quantity or weight actually delivered.

**F.6 Environmental Protection (JUN 95)**

- a. Transportation Requirements

- (1) The transportation of hazardous material is governed by Department of Transportation (DOT) Hazardous Materials Regulations (Title 49 Code of Federal Regulations, Parts 170-189). If the material being transported is covered by DOT Regulations, the Contractor or its agent is responsible for certifying to DOT that hazardous materials are properly classified, described, packaged, marked, and labeled and are in a condition safe to transport based on the Contractor's or its agent's own examination of the material. (See especially 49 CFR 173.7(a)(1).)

- (2) The Government reserves the right to conduct reasonable inspection of the Contractor's or its agent's transportation conveyances or other equipment utilized to effect removal of the material purchased under this Solicitation. Inspection may occur prior to, during, or subsequent to removal of the material from Government storage locations. The Contractor or its agent shall provide Government representatives with access and any reasonable assistance required to conduct this inspection.

b. Material Safety Data Sheets

(1) Offerors are warned that unprotected exposure to hazardous substances, hazardous materials and hazardous chemicals may significantly increase the risk of health problems. The Contractor shall comply with all applicable Occupational Safety and Health Administration (OSHA) and any other Federal, state or local laws, codes, ordinances, and regulations (including obtaining any required licenses or permits) governing exposure to, and storage, handling, transportation, and disposition of, this material.

(2) Material Safety Data Sheets as required by OSHA Hazard Communication Standard - 29 CFR 1910.1200 are incorporated herein. (See Section J.4) This data provides specific toxicity and health related data for the protection of human health and the environment. Offerors should review this information carefully. It is the responsibility of the Contractor to further communicate this information to the distributor, manufacturer, user and/or transporter of this material as may be required by Federal regulations.

(3) Offerors shall also refer to 29 CFR 1910 Occupational Safety and Health Standards, specifically sections 1910.1000 through 1050. These occupational standards set standards for permissible exposures, methods of compliance, personal protective equipment, and other measures that must be taken when working with, or in proximity to, hazardous materials, chemicals and substances in the United States and its territories and possessions.

c. Use and Disposition

(1) The Contractor certifies that it shall use and ultimately dispose of any hazardous material purchased under this Solicitation in accordance with all applicable Federal, state, local and international laws and regulations and in a manner safe for the public and the environment.

(2) The material offered under this Solicitation is not, in its present form, subject to EPA Hazardous Waste Regulations (40 CFR Part 260, et seq.) issued under the Resource Conservation and Recovery Act. However, it is possible that use of this material will lead to the creation of a hazardous waste. 40 CFR Part 260, et seq., details the responsibilities of generators, transporters, treaters, storers, and disposers of hazardous waste. Failure to comply with these regulations can lead to civil and criminal penalties.

(3) The wood pallets or materials used to package the commodity sold under this Solicitation may have been treated with a wood preservative to protect it from insect attack and decay. These preservatives penetrate and remain in the wood for a long time and may pose certain hazards if precautions are not taken during the handling, use, and disposal of these treated wood products. Treated wood products should not be burned in open fires. Contractors are encouraged to seek advice on proper disposal from the local environmental protection agency.

## **F.7 NRC Reporting Requirements**

- a. As required by NRC, the Contractor shall submit Nuclear Material Transaction Reports (NMTR) as required by 10 CFR 75:34 to the following address:

Program Administrator  
NAC International  
INA NMMSS PROGRAM  
P.O. Box 922088  
Norcross, GA 30010

- b. Contractor shall provide a copy of the NRC Form to DNSC at the same time it is sent to NRC.

**SECTION G - CONTRACT ADMINISTRATION DATA****G.1 Amendments and Modifications (JAN 95)**

a. Changes in terms and conditions of this Solicitation shall be accomplished by written amendment only.

b. Changes in terms and conditions of any resulting contract shall be accomplished only by written modification signed by the Contracting Officer.

**G.2 Title (JAN 98)**

Title to the material shall pass to the Contractor upon execution of the contract; however, removal is subject to the remaining terms and conditions of the solicitation and any resulting contract.

**G.3 Risk of Loss (JAN 98)**

a. Prior to the date specified for removal, the Government shall be responsible only for the exercise of reasonable care for the protection of the material.

b. After the date specified for removal, or any extension approved in writing by the Contracting Officer, all risk of loss, damage, or destruction from any cause whatsoever, shall be borne by the Contractor.

**G.4 Limitation on Government's Liability (JAN 95)**

a. Except as provided in paragraph b. in any case where liability of the Government to the Contractor has been established, the measure of the Government's liability shall not exceed refund of whatever portion of the purchase price the Contractor has paid.

b. Where specifically authorized in writing by the Contracting Officer, the Contractor may recover reasonable costs of packing, loading, and transportation incurred in connection with return of material to the Government.

**G.5 Protests (FEB 97)**

a. Companies protesting any resultant sale under this solicitation may file a protest 1) with the Contracting Officer (see paragraph d.1), or 2) with the General Accounting Office (see paragraph e), or 3) pursuant to Executive Order 12979, with the activity for a decision at a level above the Contracting Officer (see paragraph d.2). Protests filed with the activity should be addressed to the Contracting Officer, but should clearly state that they are an "Agency Level Protest under Executive Order 12979." (This process allows for a higher level decision on the initial protest; it is not a review of a Contracting Officer's decision on a protest filed with the Contracting Officer.) Absent a clear indication of the intent to file an agency level protest, protests will be presumed to be protests to the Contracting Officer.

**b. Protests Before Award**

Protests before award may be filed not later than 10 calendar days after the basis of protest is known or should have been known, whichever is earlier. Protests may be filed directly with DNSC only or with the General Accounting Office (GAO).

**c. Protests After Award**

Protests after award shall be filed not later than 10 calendar days after the basis of protest is known or should have been known, whichever is earlier, with the exception of protests challenging a sale conducted on the basis of competitive proposals under which a debriefing is requested and, when requested, is required. In such cases, the initial protest shall not be filed before the debriefing date offered to the protester, but shall be filed not later than 10 calendar days after the date on which the debriefing is held and the basis of protest is known or should have been known, whichever is earlier. Protests must be in writing and may be filed directly with the Contracting Officer, with the DNSC or with the GAO.

**d. Service of Protest**

1. Protests shall be served on the Contracting Officer by obtaining written and dated acknowledgment of receipt from:

Attn: DNSC-P - (Insert name of the Contracting Officer)  
Defense National Stockpile Center  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand delivered)  
Ft. Belvoir, VA 22060-6223

2. Protest shall be served on the DNSC for a decision at a level above the Contracting Officer by obtaining written and dated acknowledgment of receipt from:

Attn: DNSC-P, Director, Directorate of  
Stockpile Contracts  
Defense National Stockpile Center  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand delivered)  
Ft. Belvoir, VA 22060-6223

**e. Receipt of Protest**

A copy of the protest shall be received in the office designated above within one day of filing a protest with the GAO at the following address:

General Counsel  
Attn: Procurement Law Control Group  
U.S. General Accounting Office  
441 G Street, NW  
Washington, DC 20548

**G.6 Disputes (JAN 95)**

**a.** This contract is subject to the Contract Disputes Act of 1978 (41 U.S.C. 601-613) (the Act).

**b.** Except as provided in the Act, all disputes arising under or relating to this contract shall be resolved under this clause.

**c.** "Claim," as used in this clause, means a written demand or written assertion by one of the contracting parties seeking, as a matter of right, the payment of money in a sum certain, the adjustment or interpretation of contract terms, or other relief arising under or relating to this contract. A claim arising under a contract, unlike a claim relating to that contract, is a claim that can be resolved under a contract clause that provides for the relief sought by the claimant. However, a written demand or written assertion by the Contractor seeking the payment of money exceeding \$100,000 is not a claim under the Act until certified as required by subparagraph **d.(2)** below. A voucher, invoice, or other routine request for payment that is not in dispute when submitted is not a claim under the Act. The submission may be converted to a claim under the Act, by complying with the submission and certification requirements of this paragraph, if it is disputed either as to liability or amount or is not acted upon in a reasonable time.

**d.** (1) A claim by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the Government against the Contractor shall be by written decision of the Contracting Officer.

(2) For Contractor claims exceeding \$100,000, the Contractor shall submit with the claim a certification that-

(i) The claim is made in good faith;

(ii) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief; and

(iii) The amount requested accurately reflects the contract adjustment for which the Contractor believes the Government is liable.

(3) (i) If the Contractor is an individual, the certification shall be executed by that individual.

(ii) If the Contractor is not an individual, the certification shall be executed by -

(A) A senior company official in charge at the Contractor's plant or location involved; or

(B) An officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

**e.** For Contractor claims of \$100,000 or less, the Contracting Officer must, if requested in writing by the Contractor, render a decision within 60 days of the request. For Contractor-certified claims over \$100,000, the Contracting Officer must, within 60 days, decide the claim or notify the Contractor of the date by which the decision will be made.

**f.** The Contracting Officer's decision shall be final unless the Contractor appeals or files a suit as provided in the Act.



**g.** At the time a claim by the Contractor is submitted to the Contracting Officer or a claim by the Government is presented to the Contractor, the parties, by mutual consent, may agree to use alternative means of dispute resolution. When using alternative dispute resolution procedures, any claim, regardless of amount, shall be accompanied by the certificate described in paragraph **d(2)** of this clause, and executed in accordance with paragraph **d(3)** of this clause.

**h.** The Government shall pay interest on the amount found due and unpaid from (1) the date the Contracting Officer receives the claim (properly certified if required), or (2) the date payment otherwise would be due, if that date is later, until the date of payment. Simple interest on claims shall be paid at the rate, fixed by the Secretary of the Treasury as provided in the Act, which is applicable to the period during which the Contracting Officer receives the claim and then at the rate applicable for each 6-month period as fixed by the Treasury Secretary during the pendency of the claim.

**i.** The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under the contract, and comply with any decision of the Contracting Officer.

#### **G.7 Default (JUL 97)**

**a.** (1) The Government may, by written notice of default to the Contractor, terminate this contract in whole or in part if the Contractor fails to -

(i) Make payment and remove the material within the time specified in this contract or any extension;

(ii) Remove the material within the time specified in this contract irrespective of whether or not payment has been made;

(iii) Make progress, so as to endanger performance of this contract; or

(iv) Perform any of the other provisions of this contract.

(2) The Government's right to terminate this contract under (1)(i) through (1)(iv) above, may be exercised if the Contractor does not cure such failure within 10 days (or more if authorized in writing by the Contracting Officer) after receipt of the notice from the Contracting Officer specifying the failure. If at any time prior to the expiration of this contract, the Contractor makes it clear either by words, actions or circumstances, that the Contractor is unwilling or unable to perform under this contract, the Government shall not be required to furnish the Contractor notice specifying a failure under this contract, prior to exercising its right to terminate this contract for default and seek damages.

(3) Upon the Contractor's failure to cure such default within that period (or such further period as the Contracting Officer may allow), the Contractor shall lose all right, title and interest which it might otherwise have acquired in and to the material as to which a default has occurred.

**b.** If the Government terminates the contract, the Contractor shall be held liable for damages as described below. However, in no event will damages exceed the original contract price.

**c.** If the Government terminates the contract for default, it may subsequently resell the material for the Contractor's account, under the terms and in the manner the Contracting Officer considers appropriate, and assess the Contractor the difference between the contract price and the price obtained on resale. In no event will the Contractor be refunded any money if the

Government obtains a greater price on resale, nor will an accounting of money be made until resale is complete. In the event that the Government does not succeed in reselling the material within 12 months, the Contractor may be held liable for the full contract price for the quantity of material on which the default has occurred. In order to calculate the Government's damages on contracts where the contract price is determined on a formula-price basis, the Government will establish the contract price for the quantity of material on which the default has occurred as follows: Using the pricing mechanism set forth in Section **I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**, the Government will set the price as though the material had been priced on the last day of the contract contract period or the date of the termination notice, whichever is earlier.

**d.** The rights and remedies of the Government in this clause are in addition to any other rights and remedies provided by law or under this contract.

#### **G.8 Termination for Convenience of the Government (DEC 97)**

**a.** The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the Government's interest. If this contract is terminated, the Government shall only be liable for actual costs incurred by the Contractor before the effective date of termination.

**b.** If a bona fide requirement for the material develops or exists prior to removal of the material from Government control, the Government may withdraw that material from the sale. In the event of a withdrawal under this condition, the Government shall be liable only for the refund of the contract price of the withdrawn material or such portion of the contract price as it may have received plus simple interest at the rate established by the Secretary of the Treasury.

#### **G.9 Excusable Delays (MAY 95)**

**a.** In the event either party should be prevented from performing under this contract by reason of any unforeseeable cause beyond its control and without its fault or negligence, including, but not restricted to, acts of God or of the public enemy, sovereign acts of the United States, acts of a foreign Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather, performance under the contract shall be suspended in whole or in part until the cause ceases to exist and thereafter the time for fulfillment of the contract shall be extended by the length of time during which the cause prevented performance under the contract.

**b.** This section shall also apply to an excusable delay condition that prevents delivery at a consignee's plant if-

(1) the delay meets the criteria in paragraph **a.** above; and

(2) the identity of the consignee is known to the Government prior to commencement of the excusable delay condition.

**c.** The Contractor shall notify the Contracting Officer, in writing, of the nature and extent of the excusable delay condition promptly after the commencement thereof, but in any event prior to outloading of the material from the storage location from which it is to be shipped. The Contractor shall notify the Contracting Officer, in writing, within ten (10) calendar days when the excusable delay condition ceases to exist.

**G.10 Setoff of Funds (JUL 98)**

The Contractor agrees that the Government may use all or a portion of any monies received by Government to satisfy, in whole or in part, any debt (e.g. delinquent payments, interest or storage charges), arising out of this or any other transaction.

**G.11 Indemnification Agreement (JUN 96)**

The Contractor shall save and hold harmless and indemnify the Government against any and all liabilities, claims, and costs of whatsoever kind and nature for injury to or death of any person or persons and for loss or damage to any property (Government or otherwise) occurring in connection with or in anyway incident to or arising out of the occupancy, use, service, operations, or performance of work in connection with the contract. Whether due to negligence or not of the Contractor, the Contractor agrees to defend any and all claims or suits against the United States, whether well founded or not, in any way whatsoever alleged to have arisen from or been connected with performance of this contract and to reimburse the United States for any legal expenses (including salaries of attorneys) incurred by the United States in defending such suits.

**G.12 Covenant Against Contingent Fees (JAN 95)**

a. The Contractor warrants that no person or agency has been employed or retained to solicit or obtain this contract upon an agreement or understanding for a contingent fee, except a bona fide employee or agency. For breach or violation of this warranty, the Government shall have the right to annul this contract without liability or, in its discretion, to add to the contract price or consideration, or otherwise recover, the full amount of the contingent fee.

b. "Bona fide agency," as used in this paragraph, means an established commercial or selling agency, maintained by a Contractor for the purpose of securing business, that neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds itself out as being able to obtain any Government contract or contracts through improper influence.

c. "Bona fide employee," as used in this paragraph, means a person, employed by a Contractor and subject to the Contractor's supervision and control as to time, place, and manner of performance, who neither exerts nor proposes to exert improper influence to solicit or obtain Government contracts nor holds out as being able to obtain any Government contract or contracts through improper influence.

d. "Contingent fee," as used in this paragraph, means any commission, percentage, brokerage, or other fee that is contingent upon the success that a person or concern has in securing a Government contract.

e. "Improper influence," as used in this paragraph, means any influence that induces or tends to induce a Government employee or officer to give consideration or to act regarding a Government contract on any basis other than the merits of the matter.

**SECTION H - DEFINITIONS (JUN 95)**

As used throughout this Solicitation, the following terms shall have the meaning set forth below:

- a.** The term "Contracting Officer" means a person with the authority to enter into, administer, and/or terminate contracts and make related determinations and findings.
- b.** The term "small business concern" for the purpose of this Solicitation, is a concern, including its affiliates, which is independently owned and operated, is not dominant in the field of operation in which it is offering on Government contracts, and qualified as a small business under the criteria and size standards in 13 CFR Part 121.
- c.** The terms "Offeror", "Purchaser", or "Contractor" may be used interchangeably.

**SECTION I - SUBMITTALS**

**COMPLETE AND RETURN ALL OF THE FOLLOWING WITH YOUR OFFER, UNLESS ANNUAL REPRESENTATIONS, CERTIFICATIONS, AND IDENTIFICATIONS HAVE BEEN SUBMITTED THEN SUBMIT I.1 AND I.2 ONLY:**

- I.1 Sale of Government Property Negotiated Sales Contract (APR 99)**
- I.2 Item Offer Page - DLA-TANTALUM/COLUMBIUM CONCENTRATES-001 (AUG 99)**
- I.3 Certificate of Independent Price Determination (JUL 97)**
- I.4 Certification Regarding Debarment, Suspension, Proposed Debarment, Environmental Compliance, and Other Responsibility Matters (JUL 97)**
- I.5 Type of Business Organization (APR 96)**
- I.6 Small Business Concern Certification (JAN 95)**
- I.7 Clean Air and Water Certification (JUN 95)**
- I.8 Authorized Negotiators (JUN 95)**
- I.9 Persons Authorized to Request Shipment of Material (FEB 98)**
- I.10 Offeror's Billing Address (JUL 96)**
- I.11 Tantalum/Columbium Category 2 User Representation (Aug 99)**

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SALE OF GOVERNMENT PROPERTY NEGOTIATED SALES CONTRACT		CONTRACT NUMBER SP0833-		PAGE of Pages	
<p>This contract is entered into by and between the United States of America, hereinafter called the "Government," represented by the Contracting Officer executing this contract and the Contractor below identified. The Government agrees to sell and the Contractor agrees to buy the material described below in accordance with the terms and conditions of DLA-Tantalum/ Columbium Concentrates-001. In the event of a conflict between the terms of the Solicitation, and this Negotiated Sales Contract, the terms of the Negotiated Sales Contract govern.</p>					
ITEM	PROPERTY DESCRIPTION AND LOCATION	QUANTITY (No. of Unit(s))	UNIT	UNIT PRICE	AMOUNT
	Tantalum/ Columbium Concentrates				
CONTRACT PERIOD EXPIRES ON:					
EXECUTION BY CONTRACTOR		EXECUTION BY GOVERNMENT			
DATE (Day, Month, Year)		UNITED STATES OF AMERICA BY:		DATE:	
NAME OF CONTRACTOR					
ADDRESS (Street, City, State & Zip Code) (Type or Print)		NAME AND TITLE OF CONTRACTING OFFICER			
Telephone Number: _____ Facsimile Number: _____					
SIGNATURE AND TITLE OF PERSON AUTHORIZED TO SIGN THIS CONTRACT (Type or print name and title under signature)		Contracting Officer <u>DN-SC-P</u> (Agency)			



**I.3 Certificate of Independent Price Determination (JUL 97)****a.** The offeror certifies that:

(1) The prices in this offer have been arrived at independently, without, for the purpose of restricting competition, any consultation, communication, or agreement with any other offeror or competitor relating to (i) those prices, (ii) the intention to submit an offer, or (iii) the methods or factors used to calculate the prices offered;

(2) The prices in this offer have not been and will not be knowingly disclosed by the offeror, directly or indirectly, to any other offeror or competitor before bid opening (in the case of a sealed bid solicitation) or contract award (in the case of a negotiated solicitation) unless otherwise required by law; and

(3) No attempt has been made or will be made by the offeror to induce any other concern to submit or not to submit an offer for the purpose of restricting competition.

**b.** Each signature on the offer is considered to be a certification by the signatory that the signatory:

(1) Is the person in the offeror's organization responsible for determining the prices being offered in this bid or offer, and that the signatory has not participated and will not participate in any action contrary to subparagraphs **a.**(1) through **a.**(3) above; or

(2)(i) Has been authorized, in writing, to act as agent for the following principals in certifying that those principals have not participated, and will not participate in any action contrary to subparagraphs **a.**(1) through **a.**(3), above

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*(insert full name of person(s) in the offeror's organization responsible for determining the prices offered in this bid or offer, and the title of his or her position in the offeror's organization);*

(ii) As an authorized agent, does certify that the principals named in subdivision **b.**(2)(i) above have not participated, and will not participate, in any action contrary to subparagraphs **a.**(1) through **a.**(3) above; and

(iii) As an agent, has not personally participated, and will not participate, in any action contrary to subparagraphs **a.**(1) through **a.**(3) above.

**c.** If the offeror deletes or modifies subparagraph **a.**(2) above, the offeror must furnish with its offer a signed statement setting forth in detail the circumstances of the disclosure.



**I.4 Certification Regarding Debarment, Suspension, Proposed Debarment,  
Environmental Compliance and Other Responsibility Matters (JUL 97)**

**a.** (1) The Offeror certifies, to the best of its knowledge and belief, that -

(i) The Offeror and/or any of its Principals -

(A) Are (\_\_\_\_) are not (\_\_\_\_) presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(B) Have (\_\_\_\_) have not (\_\_\_\_), within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property; and

(C) Are (\_\_\_\_) are not (\_\_\_\_) presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in subdivision **a. (1)(i)(B)** of this provision.

(D) Are \_\_\_\_ are not \_\_\_\_ presently indicted for or otherwise criminally or civilly charged by a Federal, state or local entity with violation of any environmental laws;

(E) Have \_\_\_\_ have not \_\_\_\_ within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for violation of a Federal, state or local environmental statute or regulation.

(ii) The Offeror has (\_\_\_\_) has not (\_\_\_\_), within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

(3) If the Offeror answers affirmatively to anything in **a.(1)**, above, the Offeror shall include in its offer an explanation of the circumstances, including the outcome.

This certification concerns a matter within the jurisdiction of an agency of the United States and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under section 1001, title 18, United States Code.

**b.** The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

**c.** A certification that any of the items in paragraph **a.** of this provision exists will not necessarily result in withholding of an award under this Solicitation. However, the

certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

**d.** Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph **a.** of this provision. The knowledge and information of a Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

**e.** The certification in paragraph **a.** of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to the other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this Solicitation for default.

### **I.5 Type of Business Organization (APR 96)**

The Offeror represents that--

**a.** It operates as ☐ a corporation incorporated under the laws of the State of \_\_\_\_\_, ☐ an individual, ☐ a partnership, ☐ a nonprofit organization, or ☐ a joint venture.

**b.** If the offeror is a foreign entity, it operates as ☐ an individual, ☐ a partnership, ☐ a nonprofit organization, ☐ a joint venture, or ☐ a corporation registered for business in \_\_\_\_\_(country)

**c.** If the offeror is a corporation, it is ☐ independent (not owned or controlled by another company), ☐ owned or controlled by \_\_\_\_\_corporation company registered for business in \_\_\_\_\_(state/country).

**d.** If the offeror is owned or controlled by another, state the relationship (e.g., wholly owned subsidiary, etc.):\_\_\_\_\_

**e.** The offeror agrees to provide additional information relating to the above representations if requested to do so by the Contracting Officer.

### **I.6 Small Business Concern Certification (JAN 95)**

The Offeror represents and certifies as part of its offer that it \_\_\_\_\_ is, \_\_\_\_\_ is not a small business concern. (See Section **H.b.**, for the definition of a small business concern.)

**I.7 Clean Air and Water Certification (JUN 95)**

a. The Offeror certifies that it is \_\_\_\_ is not \_\_\_\_ listed on the Environmental Protection Agency (EPA) List of Violating Facilities and that it will not knowingly resell this material to any company that is on the EPA List; and

b. The Offeror will immediately notify the Contracting Officer, before award, of the receipt of any communication from EPA indicating that any facility at which the Offeror plans to use material purchased under this solicitation is under consideration to be listed on the EPA List of Violating Facilities.

**I.8 Authorized Negotiators (JUN 95)**

The Offeror represents that the following individuals are authorized to negotiate on its behalf.

---

Name

---

Title

---

Telephone

---

Name

---

Title

---

Telephone

**I.9 Persons Authorized to Request Shipment of Material (JUL 95)**

The Offeror shall provide the name(s), title(s), signature(s), and telephone number(s) of representative(s) authorized to sign Section **J.3 Shipping Instructions**:

_____ Typed Name	_____ Title
---------------------	----------------

_____ Signature	_____ Telephone
--------------------	--------------------

_____ Typed Name	_____ Title
---------------------	----------------

_____ Signature	_____ Telephone
--------------------	--------------------

_____ Typed Name	_____ Title
---------------------	----------------

_____ Signature	_____ Telephone
--------------------	--------------------

**I.10 Offeror's Billing Address (JUL 96)**

The Offeror shall provide its billing address and billing facsimile number below, if different from the address in Section **I.1 Sale of Government Property Negotiated Sales Contract (JUL 97)**.

_____
_____
_____

**I.11 Tantalum/Columbium Category 2 User Representation (Aug 99)**

a. The offeror represents one of the following regarding Category 2 material:

\_\_\_ Offeror has applied with the NRC for:

\_\_\_ Specific source material license

\_\_\_ Specific export license

Date Application Filed \_\_\_\_\_

\_\_\_ Offeror has arranged with \_\_\_\_\_

\_\_\_\_\_ (name of company) who has:

\_\_\_ Specific source material license

\_\_\_ Specific export license

\_\_\_ Offeror intends to apply for a specific source material or export license or make arrangements with a company that has an NRC license. Provide details below:

---

---

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---

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b. The information provided above will be considered when evaluating offers in accordance with Section B.7.

c. The Offeror agrees that if there are any changes to the information listed in subparagraph a., above, it will promptly notify DNSC in writing within 48 hours.

d. If the change occurs prior to award and it affects the offeror's ability to secure a NRC specific source material license or export license, the offeror acknowledges that award may be delayed or no award issued.

e. If the change occurs after award, offeror agrees not to ship any awarded material. DNSC reserves the right to terminate the contract in accordance with Section G.7 Default for the contractor's failure to acquire the appropriate NRC license.

**SECTION J ATTACHMENTS**

- J.1 TANTALUM/COLUMBIUM ANALYSES
- J.2 STORAGE LOCATION
- J.3 SHIPPING INSTRUCTIONS
- J.4 TANTALUM/COLUMBIUM MSDS
- J.5 FEDWIRE PROCEDURES

<b><u>OUTLOADING HOURS</u></b>	<b><u>DAYS</u></b>	<b><u>SITE</u></b>	<b><u>AVAILABLE TRANSPORTATION</u></b>	<b><u>REGION</u></b>
0715-1515	Mon-Thr	3200 Sheffield Ave	Truck/Rail	West
0815-1515	Fri	Hammond, IN 46327-1002		
		Phone: 219-937-5383		
		Fax: 219-937-5265		

**Region Management Office:**

Operations West:

Mr. Dennis Lynch  
Defense Logistics Agency  
Defense National Stockpile Center DNSC-MOW  
8725 John J. Kingman Road, Suite 4616  
Fort Belvoir, VA 22060-6223  
Telephone: (703) 767-7609

Shipping Request Number: \_\_\_\_\_

### SHIPPING INSTRUCTIONS (JAN 95)

1. Contractor:\_\_\_\_\_

2. DNSC Contract Number:\_\_\_\_\_

3. Commodity Name:\_\_\_\_\_

4. Item/Pile:\_\_\_\_\_

5. Depot:\_\_\_\_\_

6. a. Quantity:\_\_\_\_\_

b. Unit Price:\_\_\_\_\_

c. Total Dollar Value:\_\_\_\_\_

7. Shipping Method:\_\_\_\_\_

8. a. Carrier Name:\_\_\_\_\_

b. Point of Contact:\_\_\_\_\_

c. Telephone Number of Carrier:\_\_\_\_\_

9. Date Shipment Desired:\_\_\_\_\_

10. Ship To:\_\_\_\_\_

11. Minimum Load:\_\_\_\_\_

12. Outloader:\_\_\_\_\_

13. Sampler:\_\_\_\_\_

14. Copy of Payment Attached: Yes \_\_\_\_\_ No \_\_\_\_\_

15. Remarks:  
\_\_\_\_\_

16. Contractor's Signature: \_\_\_\_\_

Date:

Telephone:

17. Shipment Approved and Authorized: \_\_\_\_\_

Contracting Officer:

Date:



---

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

DEFENSE LOGISTICS AGENCY  
DEFENSE NATIONAL STOCKPILE CENTER  
8725 JOHN J. KINGMAN ROAD  
SUITE 3339  
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:  
1-800-424-9300 (NORTH AMERICA)  
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: COLUMBIUM CONCENTRATES

TRADE NAMES/SYNONYMS:  
DLANA387

CREATION DATE: Jul 24 1992  
REVISION DATE: Sep 16 1999

---

SECTION 2 COMPOSITION, INFORMATION ON INGREDIENTS

---

COMPONENT: NIOBIUM OXIDE  
CAS NUMBER: 1313-96-8  
EC NUMBER (EINECS): 215-213-6  
PERCENTAGE: <99.0

COMPONENT: TANTALUM PENTOXIDE  
CAS NUMBER: 1314-61-0  
EC NUMBER (EINECS): 215-238-2  
PERCENTAGE: >60.0

COMPONENT: TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
EC NUMBER (EINECS): 236-675-5  
PERCENTAGE: <5.0

COMPONENT: STANNIC OXIDE  
CAS NUMBER: 18282-10-5  
EC NUMBER (EINECS): 242-159-0  
PERCENTAGE: <4.0

COMPONENT: PHOSPHORUS PENTOXIDE  
CAS NUMBER: 1314-56-3  
EC NUMBER (EINECS): 215-236-1  
PERCENTAGE: <0.10

COMPONENT: ANTIMONY  
CAS NUMBER: 7440-36-0  
EC NUMBER (EINECS): 231-146-5  
PERCENTAGE: <0.03

---

SECTION 3      HAZARDS IDENTIFICATION

---

NFPA RATINGS (SCALE 0-4):    HEALTH=1    FIRE=0    REACTIVITY=0

EC CLASSIFICATION (CALCULATED): Not determined.

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: Solid.

MAJOR HEALTH HAZARDS: No significant target effects reported.

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information on significant adverse effects

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information on significant adverse effects

EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

INGESTION:

SHORT TERM EXPOSURE: no information on significant adverse effects

LONG TERM EXPOSURE: no information on significant adverse effects

CARCINOGEN STATUS:

OSHA: N

NTP: N

IARC: N

---

SECTION 4      FIRST AID MEASURES

---

INHALATION: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION: If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention, if needed.

---

SECTION 5      FIRE FIGHTING MEASURES

---

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

---

## SECTION 6 ACCIDENTAL RELEASE MEASURES

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### OCCUPATIONAL RELEASE:

Collect spilled material in appropriate container for disposal. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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## SECTION 7 HANDLING AND STORAGE

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Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

---

## SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

---

### EXPOSURE LIMITS:

#### NIOBIUM OXIDE:

##### NUISANCE PARTICULATES (NUISANCE DUST):

5 mg/m3 OSHA TWA (respirable particulate)

15 mg/m3 OSHA TWA (total particulate)

10 mg/m3 ACGIH TWA (Notice of Intended Changes 1994-1995) (total particulate) (no asbestos and <1% crystalline silica)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH III # 0500, Nuisance Dust (total), # 0600 (respirable)

#### TANTALUM PENTOXIDE:

##### TANTALUM METAL AND OXIDE DUSTS (as Ta):

5 mg/m3 OSHA TWA

5 mg/m3 ACGIH TWA

5 mg/m3 NIOSH recommended TWA 10 hour(s)

10 mg/m3 NIOSH recommended STEL

5 mg/m3 DFG MAK 4 times/shift (total dust)

5 mg/m3 UK OES TWA

10 mg/m3 UK OES STEL

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH III # 0500, Nuisance Dust (total)

**TITANIUM DIOXIDE:**

15 mg/m3 OSHA TWA (total particulate)  
10 mg/m3 OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30, 1993)  
10 mg/m3 ACGIH TWA  
6 mg/m3 DFG MAK (fine dust)  
10 mg/m3 UK OES TWA (total dust)  
4 mg/m3 UK OES TWA (respirable particulate)

MEASUREMENT METHOD: Particulate filter; Acid; Atomic absorption spectrometry; NIOSH II(3) # S385

**STANNIC OXIDE:****TIN AND INORGANIC TIN COMPOUNDS (as Sn):**

2 mg/m3 OSHA TWA  
2 mg/m3 ACGIH TWA  
2 mg/m3 NIOSH recommended TWA 10 hour(s)  
2 mg(Sn)/m3 UK OES TWA  
4 mg(Sn)/m3 UK OES STEL

MEASUREMENT METHOD: Particulate filter; Acid; Atomic absorption spectrometry; NIOSH II(3) # S183

**VENTILATION:** Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

**EYE PROTECTION:** Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

**CLOTHING:** Wear appropriate chemical resistant clothing.

**GLOVES:** Wear appropriate chemical resistant gloves.

**RESPIRATOR:** Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate filter.

**For Unknown Concentrations or Immediately Dangerous to Life or Health -**

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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**SECTION 9      PHYSICAL AND CHEMICAL PROPERTIES**  
-----

**PHYSICAL DESCRIPTION:** Solid.

**BOILING POINT:** Not applicable

**MELTING POINT:** Not available

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY:** Not applicable

SPECIFIC GRAVITY: Not available  
WATER SOLUBILITY: Not available  
PH: Not applicable  
VOLATILITY: Not applicable  
ODOR THRESHOLD: Not available  
EVAPORATION RATE: Not applicable  
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

---

SECTION 10      STABILITY AND REACTIVITY

---

REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: None reported.

INCOMPATIBILITIES: halogens, metals, reducing agents

NIOBIUM OXIDE:

CHLORINE TRIFLUORIDE: Incompatible.

LITHIUM: Reacts violently and exothermically at 320 C to 490 C.

TITANIUM DIOXIDE:

ALUMINUM: Reaction is accompanied by incandescence.

CALCIUM: Reaction is accompanied by incandescence.

LITHIUM: Reaction occurs around 200 C, with incandescence.

MAGNESIUM: Reaction is accompanied by incandescence.

POTASSIUM: Reaction is accompanied by incandescence.

SODIUM: Reaction is accompanied by incandescence.

ZINC: Reaction is accompanied by incandescence.

STANNIC OXIDE:

CHLORINE TRIFLUORIDE: Violent reaction, ignition often occurring.

HYDROGEN TRISULFIDE: Possible ignition.

MAGNESIUM: Explodes when heated.

POTASSIUM: Reduced with incandescence.

SODIUM: Reduced with incandescence.

ALUMINUM: Reduced violently or explosively.

TANTALUM PENTOXIDE:

BROMINE TRIFLUORIDE: React vigorously.

CHLORINE TRIFLUORIDE: Reacts violently, producing flame.

LITHIUM: Reaction occurs around 410 C with consequent temperature rise to 595 C.

HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

---

SECTION 11 TOXICOLOGICAL INFORMATION

---

## NIOBIUM OXIDE:

## TOXICITY DATA:

>10 gm/kg oral-rat LD<sub>50</sub>; >10 gm/kg intraperitoneal-rat LD<sub>50</sub>; >4 gm/kg oral-mouse LD<sub>50</sub>; >10 gm/kg intraperitoneal-mouse LD<sub>50</sub>; 60 gm/kg/6 week(s) intermittent oral-rat TDLo

ACUTE TOXICITY LEVEL: Insufficient Data.

ADDITIONAL DATA: In vitro studies indicate that the inhibition of adenosine triphosphatase may be involved with the biological activity of niobium.

## TANTALUM PENTOXIDE:

## TOXICITY DATA:

8 gm/kg oral-rat LD<sub>50</sub>; >5 gm/kg intraperitoneal-rat LD<sub>50</sub>; >4 gm/kg oral-mouse LD<sub>50</sub>

## ACUTE TOXICITY LEVEL:

Slightly Toxic: ingestion

## TITANIUM DIOXIDE:

## IRRITATION DATA:

300 ug/3 day(s)-intermittent skin-human mild

## TOXICITY DATA:

6820 mg/m<sup>3</sup>/4 hour(s) inhalation-rat LC<sub>50</sub> (Dudick, Inc.); >24000 mg/kg oral-rat LD<sub>50</sub> (Dudick, Inc.); 250 mg/m<sup>3</sup>/6 hour(s)-4 week(s) intermittent inhalation-rat TCLo

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Limited Evidence, Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen

Increased incidences of lung adenomas in rats of both sexes and of cystic keratinizing lesions diagnosed as squamous-cell carcinomas in female rats were observed in animals that had inhaled high but not low doses of titanium dioxide. Intratracheal administration of titanium dioxide in combination with benzo(a)pyrene to hamsters resulted in an increase in the incidence of benign and malignant tumors of the larynx, trachea and lungs over that in benzo(a)pyrene-treated controls.

## ACUTE TOXICITY LEVEL:

Moderately Toxic: inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

## TUMORIGENIC DATA:

250 mg/m<sup>3</sup> inhalation-rat TCLo/6 hour(s)-2 year(s) intermittent; 360 mg/kg intramuscular-rat TDLo/2 year(s) intermittent; 260 mg/kg intramuscular-rat TD/84 week(s) intermittent; 10 mg/m<sup>3</sup> inhalation-rat TC/18 hour(s)-2 year(s) intermittent

## MUTAGENIC DATA:

micronucleus test - mouse intraperitoneal 3 gm/kg 3 day(s)-continuous; DNA inhibition - hamster lung 500 mg/L

## STANNIC OXIDE:

## TOXICITY DATA:

>20 gm/kg oral-rat LD<sub>50</sub>; >6600 mg/kg intraperitoneal-rat LD<sub>50</sub>; >20 gm/kg oral-mouse LD<sub>50</sub>; >6600 mg/kg intraperitoneal-mouse LD<sub>50</sub>

ACUTE TOXICITY LEVEL: Insufficient Data.

## HEALTH EFFECTS:

## INHALATION:

STANNIC OXIDE: May cause chest pain, dyspnea, rales, and leukocytosis. Repeated exposure may cause stannosis, a benign pneumoconiosis, without symptoms of interference of pulmonary function. See information on inorganic tin compounds and metal fume fever.

## ACUTE EXPOSURE:

NIOBIUM OXIDE: Dust may cause respiratory irritation.

TANTALUM PENTOXIDE: Tantalum dust has a low order of toxicity and is relatively inert. It has produced transient inflammatory lesions in the lungs of animals after severe exposure.

TITANIUM DIOXIDE: Inhalation may cause irritation and coughing. Nuisance dusts may cause unpleasant deposits in the nasal passages.

INORGANIC TIN COMPOUNDS: Exposure to some inorganic tin compounds may result in irritation of the mucous membranes, nose, and throat.

METAL FUME FEVER: Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

## CHRONIC EXPOSURE:

NIOBIUM OXIDE: None known in humans.

TANTALUM PENTOXIDE: Repeated or prolonged exposure of tantalum dust may cause bronchitis.

TITANIUM DIOXIDE: A few cases of slight fibrosis without disabling injury have been reported from occupational exposure. Rats repeatedly exposed to concentrations of 10-328 million particles/ft<sup>3</sup> for as long as 13 months showed small focal areas of emphysema which were attributed to large deposits of dust. Rats exposed to concentrations of 10, 50, and 250 mg/m<sup>3</sup> for 6 hours/day, 5 days/week for 2 years showed no abnormal clinical signs, body weight changes, or excess mortality in any exposed group. There were however dose-dependent increases in the incidence of pneumonia, tracheitis and rhinitis with squamous metaplasia in the anterior nasal cavity. At 10 mg/m<sup>3</sup>, the pulmonary response satisfied the criteria for a nuisance dust. Bronchioalveolar adenomas and cystic keratinizing squamous cell carcinomas occurred only at the 250 mg/m<sup>3</sup> level, twenty-five times the threshold limit value. These lung tumors were different from common human lung cancers in terms of tumor type, location, and tumorigenesis, and were devoid of tumor metastasis.

INORGANIC TIN COMPOUNDS: No data available.

METAL FUME FEVER: There is no form of chronic metal fume fever, however, repeated bouts with symptoms as described above are quite common. Resistance to the condition develops after a few days of exposure, but is quickly lost in 1 or 2 days.

SKIN CONTACT:

ACUTE EXPOSURE:

NIOBIUM OXIDE: No irritating effects have been reported in humans. Some niobium compounds may irritate the skin.

TANTALUM PENTOXIDE: Some tantalum compounds have been suspected of causing skin irritation.

TITANIUM DIOXIDE: Topically it is reported to be devoid of toxicity and chemically non-irritating. However, titanium dioxide may occasionally be so occlusive that it produces miliaria.

STANNIC OXIDE: It is not absorbed and is relatively innocuous to the skin.

CHRONIC EXPOSURE:

NIOBIUM OXIDE: No data available.

TANTALUM PENTOXIDE: No data available.

TITANIUM DIOXIDE: Application of 300 ug for 3 days intermittently to human skin produced mild irritation.

STANNIC OXIDE: No data available.

EYE CONTACT:

ACUTE EXPOSURE:

NIOBIUM OXIDE: May cause irritation.

TANTALUM PENTOXIDE: May cause slight irritation but not known to be an irritant.

TITANIUM DIOXIDE: Introduction by tattooing into the cornea of rabbit eyes and patients with corneal scars resulted in permanent white coloration, but no irritation.

STANNIC OXIDE: Particulates in the eye may cause lacrimation.

CHRONIC EXPOSURE:

NIOBIUM OXIDE: No effects reported, may cause conjunctivitis.

TANTALUM PENTOXIDE: No data available.

TITANIUM DIOXIDE: No data available.

STANNIC OXIDE: No data available.

INGESTION:

ACUTE EXPOSURE:

NIOBIUM OXIDE: No specific data available. Metallic niobium has a low



order of toxicity because it is poorly absorbed in the stomach and intestines.

TANTALUM PENTOXIDE: The lethal dose reported in rats is 4500 mg/kg.

TITANIUM DIOXIDE: Titanium dioxide has been reported to be physiologically inert. Ingestion of large quantities may cause intestinal obstruction. However, a pound has been ingested without apparent harm or distress.

STANNIC OXIDE: Most tin salts are relatively non-toxic and poorly absorbed through the gastrointestinal tract.

CHRONIC EXPOSURE:

NIOBIUM OXIDE: Niobium in the drinking water at 5 ppm plus 1.62 mg/kg in the diet caused liver degeneration.

TANTALUM PENTOXIDE: No data available.

TITANIUM DIOXIDE: Mice and rats fed 50,000 and 25,000 ppm for 103 weeks showed no evidence of toxicity and no increased incidence of tumors.

STANNIC OXIDE: Rat feeding studies for 4-13 weeks at levels of 0.03, 0.10, 0.30 and 1.0 percent or for any level up to 7900 ppm, resulted in no adverse effects.

-----  
SECTION 12 ECOLOGICAL INFORMATION  
-----

Not available

-----  
SECTION 13 DISPOSAL CONSIDERATIONS  
-----

Dispose in accordance with all applicable regulations.

-----  
SECTION 14 TRANSPORT INFORMATION  
-----

-----No  
classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned. -

-----  
SECTION 15 REGULATORY INFORMATION  
-----

U.S. REGULATIONS:

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

ANTIMONY: 5000 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): N

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: N

CHRONIC: Y

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: N

EUROPEAN REGULATIONS:

EC NUMBER: Not assigned.

-----  
SECTION 16      OTHER INFORMATION  
-----

MSDS SUMMARY OF CHANGES

SECTION 8

EXPOSURE CONTROLS, PERSONAL PROTECTION

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---

SECTION 1           CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

---

DEFENSE LOGISTICS AGENCY  
DEFENSE NATIONAL STOCKPILE CENTER  
8725 JOHN J. KINGMAN ROAD  
SUITE 3339  
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:  
1-800-424-9300 (NORTH AMERICA)  
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: TANTALUM MINERALS

TRADE NAMES/SYNONYMS:  
DLANA391

CREATION DATE: Jul 24 1992  
REVISION DATE: Sep 16 1999

---

SECTION 2           COMPOSITION, INFORMATION ON INGREDIENTS

---

COMPONENT: TITANIUM DIOXIDE  
CAS NUMBER: 13463-67-7  
EC NUMBER (EINECS): 236-675-5  
PERCENTAGE: <20.0

COMPONENT: STANNIC OXIDE  
CAS NUMBER: 18282-10-5  
EC NUMBER (EINECS): 242-159-0  
PERCENTAGE: <20.0

COMPONENT: TANTALUM PENTOXIDE  
CAS NUMBER: 1314-61-0  
EC NUMBER (EINECS): 215-238-2  
PERCENTAGE: >1.0

COMPONENT: NIOBIUM OXIDE  
CAS NUMBER: 1313-96-8  
EC NUMBER (EINECS): 215-213-6  
PERCENTAGE: >1.0

COMPONENT: URANIUM OCTAOXIDE  
CAS NUMBER: 1344-59-8  
EC NUMBER (EINECS): 215-702-4  
PERCENTAGE: <0.8

COMPONENT: THORIUM DIOXIDE  
CAS NUMBER: 1314-20-1  
EC NUMBER (EINECS): 215-225-1  
PERCENTAGE: <0.5

COMPONENT: ANTIMONY  
CAS NUMBER: 7440-36-0  
EC NUMBER (EINECS): 231-146-5

PERCENTAGE: <0.01

---

SECTION 3      HAZARDS IDENTIFICATION

---

NFPA RATINGS (SCALE 0-4):    HEALTH=1    FIRE=0    REACTIVITY=0

EC CLASSIFICATION (CALCULATED): Not determined.

EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: Small sized granular material.

MAJOR HEALTH HAZARDS: cancer hazard (in humans)

POTENTIAL HEALTH EFFECTS:

INHALATION:

SHORT TERM EXPOSURE: irritation, metal fume fever, nausea, vomiting, diarrhea, drowsiness, sterility, blood disorders, convulsions

LONG TERM EXPOSURE: same as effects reported in short term exposure

SKIN CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: no information on significant adverse effects

EYE CONTACT:

SHORT TERM EXPOSURE: irritation, tearing, eye damage

LONG TERM EXPOSURE: same as effects reported in short term exposure

INGESTION:

SHORT TERM EXPOSURE: no information on significant adverse effects

LONG TERM EXPOSURE: no information on significant adverse effects

CARCINOGEN STATUS:

OSHA: N

NTP: Y

IARC: N

---

SECTION 4      FIRST AID MEASURES

---

INHALATION: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION: If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention, if needed.

---

SECTION 5 FIRE FIGHTING MEASURES

---

FIRE AND EXPLOSION HAZARDS: Negligible fire hazard.

EXTINGUISHING MEDIA: Use extinguishing agents appropriate for surrounding fire.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.

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SECTION 6 ACCIDENTAL RELEASE MEASURES

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WATER RELEASE:

Subject to California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Keep out of water supplies and sewers.

OCCUPATIONAL RELEASE:

Large spills: Collect spilled material in appropriate container for disposal. Avoid generating dust. Clean up residue with a high-efficiency particulate filter vacuum. Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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SECTION 7 HANDLING AND STORAGE

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Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

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SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

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EXPOSURE LIMITS:

TANTALUM MINERALS:

TIN AND INORGANIC TIN COMPOUNDS (as Sn):

- 2 mg/m3 OSHA TWA
- 2 mg/m3 ACGIH TWA
- 2 mg/m3 NIOSH recommended TWA 10 hour(s)
- 2 mg(Sn)/m3 UK OES TWA
- 4 mg(Sn)/m3 UK OES STEL

MEASUREMENT METHOD: Particulate filter; Acid; Atomic absorption spectrometry; NIOSH II(3) # S183

TANTALUM METAL AND OXIDE DUSTS (as Ta):

- 5 mg/m3 OSHA TWA

5 mg/m3 ACGIH TWA  
5 mg/m3 NIOSH recommended TWA 10 hour(s)  
10 mg/m3 NIOSH recommended STEL  
5 mg/m3 DFG MAK 4 times/shift (total dust)  
5 mg/m3 UK OES TWA  
10 mg/m3 UK OES STEL

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH III # 0500,  
Nuisance Dust (total)

NUISANCE PARTICULATES (NUISANCE DUST):

5 mg/m3 OSHA TWA (respirable particulate)  
15 mg/m3 OSHA TWA (total particulate)  
10 mg/m3 ACGIH TWA (Notice of Intended Changes 1994-1995) (total  
particulate) (no asbestos and <1% crystalline silica)

MEASUREMENT METHOD: Particulate filter; Gravimetric; NIOSH III # 0500,  
Nuisance Dust (total), # 0600 (respirable)

TITANIUM DIOXIDE:

15 mg/m3 OSHA TWA (total particulate)  
10 mg/m3 OSHA TWA (total particulate) (vacated by 58 FR 35338, June 30,  
1993)  
10 mg/m3 ACGIH TWA  
6 mg/m3 DFG MAK (fine dust)  
10 mg/m3 UK OES TWA (total dust)  
4 mg/m3 UK OES TWA (respirable particulate)

MEASUREMENT METHOD: Particulate filter; Acid; Atomic absorption  
spectrometry; NIOSH II(3) # S385

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with  
applicable exposure limits.

EYE PROTECTION: Wear splash resistant safety goggles. Provide an emergency eye  
wash fountain and quick drench shower in the immediate work area.

CLOTHING: Wear appropriate chemical resistant clothing.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: Under conditions of frequent use or heavy exposure, respiratory  
protection may be needed. Respiratory protection is ranked in order from  
minimum to maximum. Consider warning properties before use.

Any dust, mist, and fume respirator.

Any air-purifying respirator with a high-efficiency particulate filter.

Any powered, air-purifying respirator with a dust, mist, and fume filter.

Any powered, air-purifying respirator with a high-efficiency particulate  
filter.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a  
pressure-demand or other positive-pressure mode in combination with a  
separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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SECTION 9      PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL DESCRIPTION: Small sized granular material.  
BOILING POINT: Not applicable  
MELTING POINT: Not available  
VAPOR PRESSURE: Not applicable  
VAPOR DENSITY: Not applicable  
SPECIFIC GRAVITY: Not available  
WATER SOLUBILITY: Not available  
PH: Not applicable  
VOLATILITY: Not applicable  
ODOR THRESHOLD: Not available  
EVAPORATION RATE: Not applicable  
COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

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SECTION 10      STABILITY AND REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: Avoid generating dust.

INCOMPATIBILITIES: metals, halogens, reducing agents

TITANIUM DIOXIDE:

ALUMINUM: Reaction is accompanied by incandescence.  
CALCIUM: Reaction is accompanied by incandescence.  
LITHIUM: Reaction occurs around 200 C, with incandescence.  
MAGNESIUM: Reaction is accompanied by incandescence.  
POTASSIUM: Reaction is accompanied by incandescence.  
SODIUM: Reaction is accompanied by incandescence.  
ZINC: Reaction is accompanied by incandescence.

TANTALUM PENTOXIDE:

BROMINE TRIFLUORIDE: React vigorously.  
CHLORINE TRIFLUORIDE: Reacts violently, producing flame.  
LITHIUM: Reaction occurs around 410 C with consequent temperature rise to 595 C.

NIOBIUM OXIDE:

CHLORINE TRIFLUORIDE: Incompatible.  
LITHIUM: Reacts violently and exothermically at 320 C to 490 C.

STANNIC OXIDE:

CHLORINE TRIFLUORIDE: Violent reaction, ignition often occurring.  
HYDROGEN TRISULFIDE: Possible ignition.  
MAGNESIUM: Explodes when heated.  
POTASSIUM: Reduced with incandescence.  
SODIUM: Reduced with incandescence.  
ALUMINUM: Reduced violently or explosively.

## HAZARDOUS DECOMPOSITION:

Thermal decomposition products: miscellaneous decomposition products

POLYMERIZATION: Will not polymerize.

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SECTION 11 TOXICOLOGICAL INFORMATION  
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## TITANIUM DIOXIDE:

## IRRITATION DATA:

300 ug/3 day(s)-intermittent skin-human mild

## TOXICITY DATA:

6820 mg/m<sup>3</sup>/4 hour(s) inhalation-rat LC<sub>50</sub> (Dudick, Inc.); >24000 mg/kg  
oral-rat LD<sub>50</sub> (Dudick, Inc.); 250 mg/m<sup>3</sup>/6 hour(s)-4 week(s) intermittent  
inhalation-rat TCLO

CARCINOGEN STATUS: IARC: Human Inadequate Evidence, Animal Limited Evidence,  
Group 3; ACGIH: A4 -Not Classifiable as a Human Carcinogen

Increased incidences of lung adenomas in rats of both sexes and of cystic  
keratinizing lesions diagnosed as squamous-cell carcinomas in female rats  
were observed in animals that had inhaled high but not low doses of titanium  
dioxide. Intratracheal administration of titanium dioxide in combination  
with benzo(a)pyrene to hamsters resulted in an increase in the incidence of  
benign and malignant tumors of the larynx, trachea and lungs over that in  
benzo(a)pyrene-treated controls.

## ACUTE TOXICITY LEVEL:

Moderately Toxic: inhalation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: respiratory disorders

## TUMORIGENIC DATA:

250 mg/m<sup>3</sup> inhalation-rat TCLO/6 hour(s)-2 year(s) intermittent; 360 mg/kg  
intramuscular-rat TDLo/2 year(s) intermittent; 260 mg/kg intramuscular-rat  
TD/84 week(s) intermittent; 10 mg/m<sup>3</sup> inhalation-rat TC/18 hour(s)-2 year(s)  
intermittent

## MUTAGENIC DATA:

micronucleus test - mouse intraperitoneal 3 gm/kg 3 day(s)-continuous; DNA  
inhibition - hamster lung 500 mg/L

## STANNIC OXIDE:

## TOXICITY DATA:

>20 gm/kg oral-rat LD<sub>50</sub>; >6600 mg/kg intraperitoneal-rat LD<sub>50</sub>; >20 gm/kg  
oral-mouse LD<sub>50</sub>; >6600 mg/kg intraperitoneal-mouse LD<sub>50</sub>

ACUTE TOXICITY LEVEL: Insufficient Data.

## TANTALUM PENTOXIDE:

## TOXICITY DATA:

8 gm/kg oral-rat LD<sub>50</sub>; >5 gm/kg intraperitoneal-rat LD; >4 gm/kg oral-mouse  
LD<sub>50</sub>

## ACUTE TOXICITY LEVEL:

Slightly Toxic: ingestion

## NIOBIUM OXIDE:

## TOXICITY DATA:

>10 gm/kg oral-rat LD; >10 gm/kg intraperitoneal-rat LD; >4 gm/kg oral-mouse  
LD<sub>50</sub>; >10 gm/kg intraperitoneal-mouse LD; 60 gm/kg/6 week(s) intermittent  
oral-rat TDLo



ACUTE TOXICITY LEVEL: Insufficient Data.

ADDITIONAL DATA: In vitro studies indicate that the inhibition of adenosine triphosphatase may be involved with the biological activity of niobium.

THORIUM DIOXIDE:

TOXICITY DATA:

>1140 mg/kg intratracheal-rat LD50

CARCINOGEN STATUS: NTP: Known Human Carcinogen; EC: Category 1

Intravascular injection in humans produced tumors of the liver, including hepatocellular carcinomas, cholangiocellular carcinomas, carcinomas of the extra-hepatic biliary system, sarcomas, hemangioendotheliomas, reticulum cell sarcomas, carcinomas of the common hepatic duct, adenocarcinomas, liver cell carcinomas, undifferentiated carcinomas, hepatomas, tumors of the kidney, including carcinomas of the renal parenchyma, and sarcomas and carcinomas of the renal pelvis. In addition, carcinomas of the maxillary sinuses, spindle cell sarcomas in the later cervical region, leukemias, and other hematologic disorders have been related to intravascular injection of thorium dioxide. Studies suggest a latency of 21-36 years. A variety of carcinomas have been induced in animals following intravenous, subcutaneous, and submucousal administration.

ACUTE TOXICITY LEVEL: Insufficient Data.

TUMORIGENIC DATA:

1 gm/kg parenteral-woman TDLo; 2880 mg/kg unreported-human TDLo; 490 mg/kg intraarterial-human TDLo; 160 mg/kg intravenous-rat TDLo; 20 gm/kg subcutaneous-mouse TDLo; 10 gm/kg intravenous-mouse TDLo; 400 mg/kg intramuscular-mouse TDLo; 1500 mg/kg intravenous-rabbit TDLo; 4 gm/kg parenteral-guinea pig TDLo/15 week(s) intermittent; 2 gm/kg unreported-hamster TDLo; 3600 mg/kg intravenous-rabbit TD; 300 mg/kg intravenous-rabbit TD/2 year(s) intermittent; 700 mg/kg parenteral-human TD; 1260 mg/kg parenteral-human TD; 2 gm/kg intraarterial-woman TD; 10 mg/kg intravenous-mouse TD; 2350 mg/kg parenteral-woman TD; 1190 mg/kg intraarterial-man TD; 1302 mg/kg intraarterial-human TD

ADDITIONAL DATA: Radioactive.

HEALTH EFFECTS:

INHALATION:

STANNIC OXIDE: May cause chest pain, dyspnea, rales, and leukocytosis. Repeated exposure may cause stannosis, a benign pneumoconiosis, without symptoms of interference of pulmonary function. See information on inorganic tin compounds and metal fume fever.

ACUTE EXPOSURE:

TITANIUM DIOXIDE: Inhalation may cause irritation and coughing. Nuisance dusts may cause unpleasant deposits in the nasal passages.

INORGANIC TIN COMPOUNDS: Exposure to some inorganic tin compounds may result in irritation of the mucous membranes, nose, and throat.

METAL FUME FEVER: Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed metal oxide particles sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst, and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude and a generalized feeling of malaise. Fever, chills,

muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

TANTALUM PENTOXIDE: Tantalum dust has a low order of toxicity and is relatively inert. It has produced transient inflammatory lesions in the lungs of animals after severe exposure.

NIOBIUM OXIDE: Dust may cause respiratory irritation.

#### CHRONIC EXPOSURE:

TITANIUM DIOXIDE: A few cases of slight fibrosis without disabling injury have been reported from occupational exposure. Rats repeatedly exposed to concentrations of 10-328 million particles/ft<sup>3</sup> for as long as 13 months showed small focal areas of emphysema which were attributed to large deposits of dust. Rats exposed to concentrations of 10, 50, and 250 mg/m<sup>3</sup> for 6 hours/day, 5 days/week for 2 years showed no abnormal clinical signs, body weight changes, or excess mortality in any exposed group. There were however dose-dependent increases in the incidence of pneumonia, tracheitis and rhinitis with squamous metaplasia in the anterior nasal cavity. At 10 mg/m<sup>3</sup>, the pulmonary response satisfied the criteria for a nuisance dust. Bronchioalveolar adenomas and cystic keratinizing squamous cell carcinomas occurred only at the 250 mg/m<sup>3</sup> level, twenty-five times the threshold limit value. These lung tumors were different from common human lung cancers in terms of tumor type, location, and tumorigenesis, and were devoid of tumor metastasis.

INORGANIC TIN COMPOUNDS: No data available.

METAL FUME FEVER: There is no form of chronic metal fume fever, however, repeated bouts with symptoms as described above are quite common. Resistance to the condition develops after a few days of exposure, but is quickly lost in 1 or 2 days.

TANTALUM PENTOXIDE: Repeated or prolonged exposure of tantalum dust may cause bronchitis.

NIOBIUM OXIDE: None known in humans.

#### SKIN CONTACT:

##### ACUTE EXPOSURE:

TITANIUM DIOXIDE: Topically it is reported to be devoid of toxicity and chemically non-irritating. However, titanium dioxide may occasionally be so occlusive that it produces miliaria.

STANNIC OXIDE: It is not absorbed and is relatively innocuous to the skin.

TANTALUM PENTOXIDE: Some tantalum compounds have been suspected of causing skin irritation.

NIOBIUM OXIDE: No irritating effects have been reported in humans. Some niobium compounds may irritate the skin.

## CHRONIC EXPOSURE:

TITANIUM DIOXIDE: Application of 300 ug for 3 days intermittently to human skin produced mild irritation.

STANNIC OXIDE: No data available.

TANTALUM PENTOXIDE: No data available.

NIOBIUM OXIDE: No data available.

## EYE CONTACT:

## ACUTE EXPOSURE:

TITANIUM DIOXIDE: Introduction by tattooing into the cornea of rabbit eyes and patients with corneal scars resulted in permanent white coloration, but no irritation.

STANNIC OXIDE: Particulates in the eye may cause lacrimation.

TANTALUM PENTOXIDE: May cause slight irritation but not known to be an irritant.

NIOBIUM OXIDE: May cause irritation.

## CHRONIC EXPOSURE:

TITANIUM DIOXIDE: No data available.

STANNIC OXIDE: No data available.

TANTALUM PENTOXIDE: No data available.

NIOBIUM OXIDE: No effects reported, may cause conjunctivitis.

## INGESTION:

## ACUTE EXPOSURE:

TITANIUM DIOXIDE: Titanium dioxide has been reported to be physiologically inert. Ingestion of large quantities may cause intestinal obstruction. However, a pound has been ingested without apparent harm or distress.

STANNIC OXIDE: Most tin salts are relatively non-toxic and poorly absorbed through the gastrointestinal tract.

TANTALUM PENTOXIDE: The lethal dose reported in rats is 4500 mg/kg.

NIOBIUM OXIDE: No specific data available. Metallic niobium has a low order of toxicity because it is poorly absorbed in the stomach and intestines.

## CHRONIC EXPOSURE:

TITANIUM DIOXIDE: Mice and rats fed 50,000 and 25,000 ppm for 103 weeks showed no evidence of toxicity and no increased incidence of tumors.

STANNIC OXIDE: Rat feeding studies for 4-13 weeks at levels of 0.03, 0.10, 0.30 and 1.0 percent or for any level up to 7900 ppm, resulted in no adverse effects.

TANTALUM PENTOXIDE: No data available.

NIOBIUM OXIDE: Niobium in the drinking water at 5 ppm plus 1.62 mg/kg in the diet caused liver degeneration.

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SECTION 12 ECOLOGICAL INFORMATION

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Not available

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SECTION 13 DISPOSAL CONSIDERATIONS

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Dispose in accordance with all applicable regulations.

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SECTION 14 TRANSPORT INFORMATION

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No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

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SECTION 15 REGULATORY INFORMATION

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U.S. REGULATIONS:

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

ANTIMONY: 5000 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y

THORIUM DIOXIDE

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: N

CHRONIC: Y

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

STATE REGULATIONS:

California Proposition 65: Y

Known to the state of California to cause the following:

THORIUM DIOXIDE

Cancer (Feb 27, 1987)

## EUROPEAN REGULATIONS:

EC NUMBER: Not assigned.

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SECTION 16      OTHER INFORMATION  
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## MSDS SUMMARY OF CHANGES

SECTION 8

EXPOSURE CONTROLS, PERSONAL PROTECTION

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## **J.5 FEDWIRE PROCEDURES**

### **FEDWIRE PROCEDURES**

The Sender should use a bank that offers wire transfer capability. The Federal Reserve Bank of New York will then process the money for deposit to the Defense National Stockpile Account with the Department of the Treasury.

#### **PROCEDURES FOR DEPOSIT SLIP(S) FOR FEDWIRE:**

To ensure the funds are credited to the Defense National Stockpile Center the following information is required on any wire transfer of funds.

1. Treasury Dept. Code - Routing No. to the Treasury  
MUST BE ON SLIP "021030004".
2. Amount of funds to be transferred.
3. Treasury Department Name - **This item is critical** -  
  
MUST APPEAR EXACTLY AS SHOWN BELOW  
  
**TREAS NYC/(CTR/BNF=/AC-00006355)**
4. Third Party Information - Purchaser's Name,  
Commodity, and Contract Number.